NYU

STERN SCHOOL OF BUSINESS

Stablecoins …

and the Upcoming Battle for Depositors

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Roadmap

1. We will talk about (Payment) Stablecoins competing for bank depositors
   - Guiding and Establishing National Innovation for US Stablecoins (GENIUS) Act, July 2025
   - This is the latest round of competition for deposits (previously, only with money market funds)

2. We will present a conceptual approach for thinking about the consequences
   - We model which depositors are most likely to switch
   - We assess the (preliminary) welfare implications of deposit competition

Overview

- GENIUS Act Payment Stablecoins (PS) may compete for deposits with
  - “rewards” or interest;
  - superior gross payment services, especially with access to Fed master or “skinny” accounts.
  - (custody and trust/fiduciary services with trust bank charters.)
- Banks lobby against rewards, access, charters, but compete in other ways:
  - Liquidity and cash management (LCM) services;
  - Other payment-related services;
  - (Information synergies, e.g., transaction activity and term loans).
  - *Money Market Funds (MMFs) and Reverse Repo (RRP) at the Federal Reserve have not poached all deposits!*
- Banks set rates/invest in tech to keep depositors who most value banking services.
- Welfare Implications: Positive externalities...
  - from liquidity synergies *fall* as bank deposits decline;
  - from bank investment in tech *rise* with competition from PS.

Background on Stablecoins

Largest Stablecoins and Recent Uses

Coin	Issuer	Size	Backing	Comment
USDT	Tether (offshore trust)	$185-190b	T-bills + Tsy repo; gold; bitcoin; secured loans	**Add GENIUS-compliant USAT** via Anchorage Digital Bank (OCC national trust bank)
USDC	Circle; NYDFS trust and offshore	$75-$80b	cash, short-term US Tsy. held at BNY Mellon	**To be GENIUS compliant** via First National Digital Currency Bank (national trust bank)
USDS	Sky Protocol (decentralized)	$11b	crypto and real-world assets	
PYUSD	Paxos Trust; NYDFS for PayPal/Venmo	$4b	deposits, T-bills, cash equivalents	likely reg oversight via national trust bank

1) Crypto market infrastructure (settlement currency)
2) DeFi (cash-leg of transactions)
   - tokenized asset trades; borrowing or lending vs. crypto assets; liquidity pools; derivatives margin or settlement)
3) Cross-border payments
4) Deposit substitutes / yield harvesting
5) Merchant payments and payouts / fintech rails (emerging)

Stablecoins and the GENIUS Act of 2025

- The GENIUS Act of 2025
  - Aspires to be a regulatory framework in which PS can flourish for traditional payments.
- Banks and Other Incumbents Respond
  - Tokenized deposits, e.g., JPM Coin (JPMD)
  - Qivalis
    - 12 large European banks plan to launch a Euro stablecoin in H2 2026
    - Applied for Electronic Money Institution license from Dutch central bank.
    - “Hope” is to “counter U.S. dominance in digital payments.”
  - Digital government-only MMFs
    - BlackRock, Franklin Templeton, JPMorgan, Wisdom Tree

More on the GENIUS Act

Selective Summary of the GENIUS Act

Definition (Stablecoin)	• Designed to be used for payment/settlement; legal obligation for timely redemption • Expectation that value will remain stable in dollars
Issuers	• Subsidiary of an insured depository or federally qualified or state qualified • Foreign issuers if home regulation deemed comparable to U.S. regime • Public, nonfinancial companies may issue only if it is determined that they will not pose risks to U.S. financial stability, the banking system, or the deposit insurance system
Scope	• Issuers limited to issuance and redemption of PS, custody and management of reserves
Reserves	• 100% backed by cash, short-term Treasuries, or similarly liquid, low-risk assets • Additional capital requirements, diversification requirements, and liquidity constraints • Segregated and held at regulated financial institutions. • In case of bankruptcy, not part of issuer's estate; priority of claims over expenses and taxes; exempt from bankruptcy stay to speed redemptions
Interest	• Issuers cannot pay interest
Fed Access	• Act does not change eligibility for Federal Reserve Master Accounts

Spillovers to Commercial Banks

"GENIUS creates a path for nonbank financial firms to compete with banks for payment services by allowing them to obtain a limited federal bank charter to offer payment stablecoins. In addition, the Federal Reserve recently proposed offering limited Fed payment accounts to payment service providers to support innovation and to ensure a safe and efficient payment system. These developments are likely to increase competition for commercial banks that have dominated the provision of payments services because of their exclusive access to the Fed's payment rails and settlement services."

- Nellie Liang and William C. Dudley, March 3 2026, Brookings:

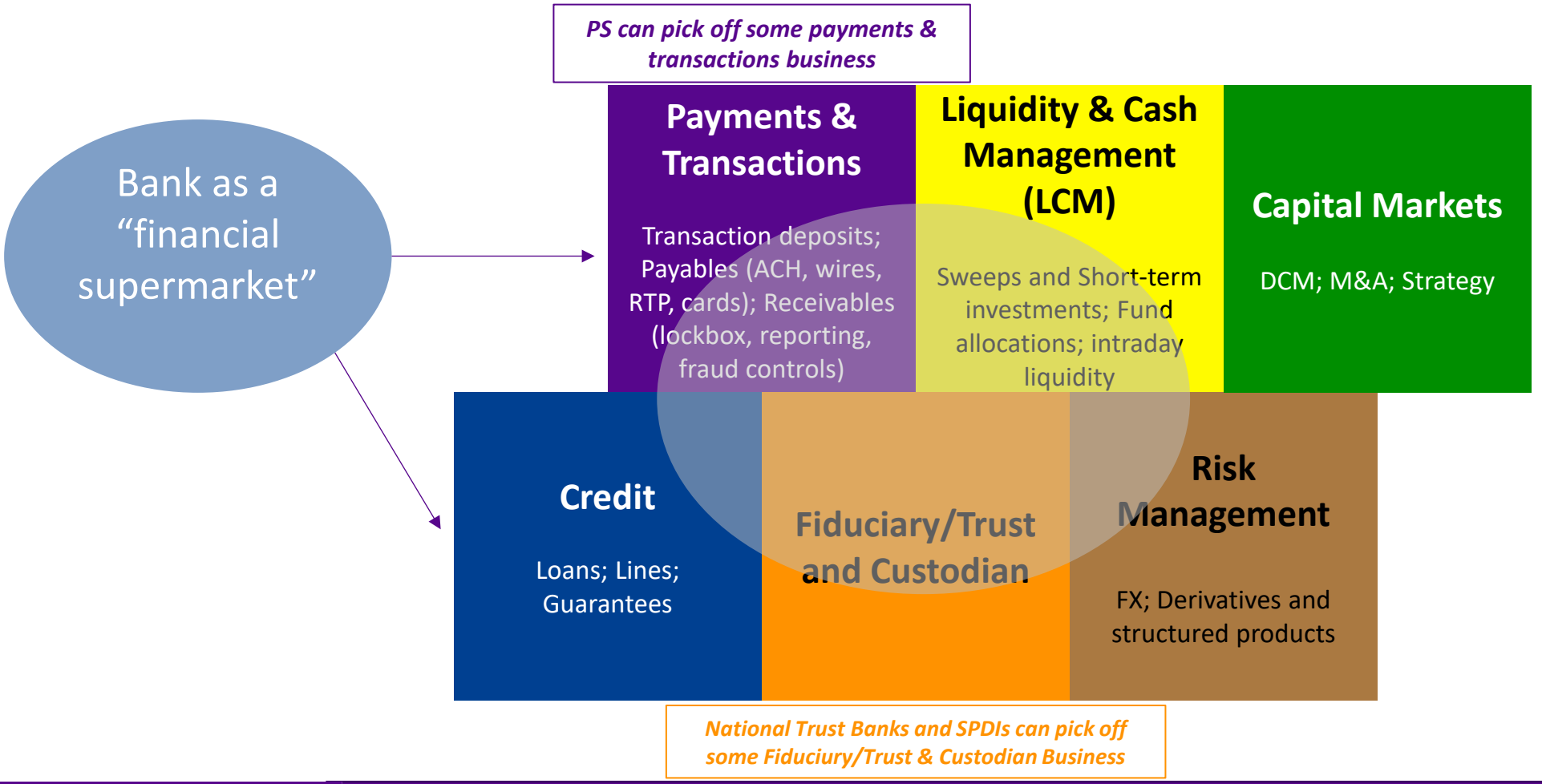
Next Steps for GENIUS Payment Stablecoins

Prohibition of Interest on Stablecoins

- GENIUS Act prohibits PS issuers from paying *"interest or yield... solely in connection with holding or using such stablecoin,"* **but**
  - USDC (Circle) + Coinbase
    - Circle is the issuer; Coinbase is the distributor and custodian.
    - Circle shares interest on USDC reserves with Coinbase as "distribution fees."
    - Coinbase pays rewards (3-5%) for holding USDC on its platform.
  - PYUSD
    - Paxos Trust is the issuer.
    - PayPal/Venmo offer rewards for keeping balances in PYUSD.
  - Kraken pays rewards on USDC (Circle) and USDG (Paxos) held on its platform.
  - Anchorage Digital Neo pays rewards on USDtb (Ethena) held on its platform.
- The legal status of these rewards is unclear.
- The bank-crypto industry controversy on rewards is holding up the Clarity Act (i.e., the regulatory framework for digital assets).

Bank Services, Synergies, and Competitive Opportunities

Liquidity, Operation, and Information Synergies



Bank Charters and Activities/Characteristics

Charter	Deposits	Loans	Trust/Fiduciary & Custody	Fed Master Accounts	Federal Preemption
OCC National Bank	✓	✓	✓	✓	✓
State Bank	✓	✓	Generally	✓	X
Industrial Loan Company	No demand deposits	✓	Depends	Generally	X
Wyoming SPDI	Fully Reserved	Not w/ Deposits	✓	May Apply	X
OCC National Trust Bank	X	X	✓	May Apply	✓

A surge in OCC National Trust Bank charter applications by Crypto asset and Stablecoin issuers!

National Trust Bank Charter Applications

Name	Description	Status
Anchorage Digital Bank National Association	Digital Assets / Crypto	Approved
BitGo		Approved
Circle / First National Digital Currency Bank		Conditional Approval
Coinbase National Trust Company		Conditional Approval
Crypto.com / Foris DAX National Trust Bank		Conditional Approval
Fidelity Digital Assets		Approved
Paxos		Approved
Ripple National Trust Bank		Conditional Approval
Sony Bank (Japan) / Connectia Trust N.A.	Digital Assets / Payments	Pending
Wise (U.K.)	Fintech / Payments	Pending

Limited Purpose and Skinny Master Accounts

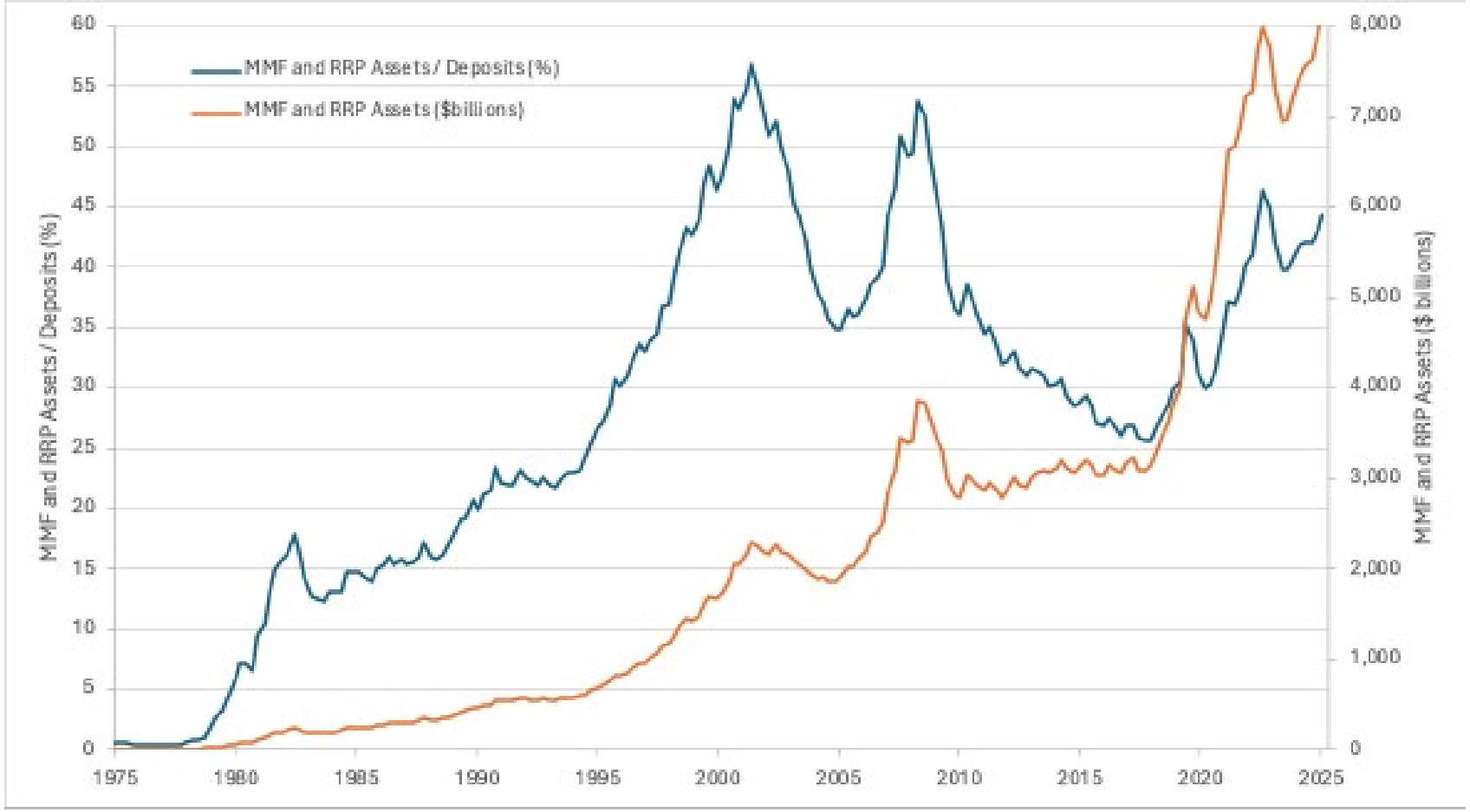
- Kraken, an SPDI, was granted a limited-purpose Federal Reserve master account in March, 2026.
  - Exact terms are not public.

- Fed proposal for Reserve Bank Payment Account or “Skinny” Master Account
  - Access to Fed payment rails (i.e., clear/settle on Fed’s balance sheet)
  - No interest on balances
  - No overdraft protection
  - No access to the discount window

History of Competition for Bank Depositors:

Money Market Funds

MMFs + RRP vs. Deposits



MMFs vs. Deposits

- MMFs were created in the 1970s
  - Deposit-like assets that could pay more than regulatory-constrained deposit rates;
  - Innovation giving money market investors diversification, divisibility, and liquidity
- Literature focus on substitutability of MMF for deposits, depending on
  - Relative yield advantage of MMFs (endogenous bank decision)
  - Overall market liquidity (more liquidity => balances less determined by substitution)
    - e.g., QE rounds after GFC to about 2016 and again in 2020
  - Risk perceptions
    - e.g., out of prime funds in 2008; into gov-only funds in 2020; out of banks in 2023
- Banks have responded to MMF competition to preserve their access to LCM depositors with
  - Political action
  - New products (NOW accounts, MMDAs, bank-sponsored MMFs, sweep structures)
  - Pricing and service adaptation

Questions for the Upcoming Battle for Depositors

Hot-Button Policy Issues

- Should stablecoins be allowed to earn “rewards”?
- Should fintech companies be allowed Fed master accounts or “skinny” Fed master accounts?
- Should fintech companies be allowed national trust bank charters? If yes, what should be the scope of permitted activities?

Roadmap…

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2. We will present a conceptual approach for thinking about the consequences

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Conceptual Approach

- Kashyap–Rajan–Stein (2002) Model (KRS: next slide) of deposit and credit line synergies

Historical Background (inspiration for KRS)

- Historically, money-changers offered liquidity to traders
- Money-changers could spread their fixed costs by selling both products: deposits, o/d a/c
- Small trading economies provided natural offsetting, e.g.,
  - At harvest, farmers deposit cash while merchants need overdraft
  - At sowing, farmers need cash while merchants save their earnings

- Modern-day banks are “financial supermarkets”
- Huge stock of deposits → huge stock of credit lines and overdraft services to retail, MSMEs, firms, non-bank financial institutions, …

Conceptual Approach

- Kashyap–Rajan–Stein (2002) Model (KRS: next slide) with Different Types of Depositors
  - Two types of depositors based on their liquidity and cash management need (LCM)
  - Bank's optimal choice of commitments (C^*) and securities holdings $({S_0}^*)$ depends on both the amount of Non-LCM deposits $(\overline{D}_{LCM})$ and LCM deposits (D_{LCM})
  - The equilibrium moves from Region 1 to Region 2 as Non-LCM deposits $(\overline{D}_{LCM})$ increase
    - Region 1: $S_0^* \leq \min\{C^* + D_{LCM}, \overline{D}_{LCM}\} \rightarrow \text{Non} - \text{LCM deposits enhance liquidity provision}$
    - Region 2: $C^* + D_{LCM} \leq S_0^* \leq \overline{D}_{LCM} \rightarrow \text{Liquidity provision is fully satiated}$

- Extension 1: Bank Competes with Money Market Fund (MMF) on rates only
- Extension 2: Bank Receives a Fee from Payment Stablecoin (PS)
- Extension 3: Bank Competes with Payment Stablecoin (PS) on also payment services

KRS Model with Different Types of Depositors

Different types of Depositors

- Suppose there are two types of depositors:
  - $\overline{D}_{LCM}$: The depositors of this type don't have liquidity and cash management need.
  - D_{LCM}: The depositors of this type have liquidity and cash management need and will withdraw the deposits and draw down the commitments at the same time.

- Fraction ω of $\overline{D}_{LCM}$ depositors withdraw at $t = 1$
- Fraction z of D_{LCM} depositors and their commitments is drawn at $t = 1$
- Both z and ω is 0 or 1 with equal probability
- Prob[Non-LCM deposits drawn $(\omega = 1)$ | LCM deposits and commitments drawn $(z = 1)$] = ρ

Deposits Withdrawal & Commitments Drawdown

Probability Stucture:

	No LCM Deposits drawn $\omega = 0$	**LCM Deposits drawn** $\omega = 1$
No Commitments and Non-LCM Deposits drawn $z = 0$	$\frac{\rho}{2}$	$\frac{1-\rho}{2}$
Commitments and Non-LCM Deposits drawn $z = 1$	$\frac{1-\rho}{2}$	$\frac{\rho}{2}$

Timeline



$t = 0$	$t = 1$	$t = 2$
Assets	**Assets**	**Bank's Payoff**
Make loans, L		Earn $r(L)$
Buy securities, S_0	Securities left, S_1	Earn $(i - \tau)S_0 + iS_1$
Liabilities	**Liabilities**	
Issue claims, e_0	Issue claims, e_1	Pay $2ie_0 + \left(ie_1 + \alpha e_1^2/2\right)$
Issue deposits to LCM customer, D_{LCM}	LCM-Deposits left, $(1 - z)D_{LCM}$	Pay 0
Issue deposits to Non-LCM customer, $\overline{D}_{LCM}$	Non-LCM deposits left, $(1 - \omega)\overline{D}_{LCM}$	Pay 0
Sell commitments to LCM customer, C	Commitments drawn, zC	Earn $fC + izC$

Bank's Problem with Different Types of Deposits

- Bank maximizes expected net income at $t = 2$

$$\max_{L,C,S_0} E\left\{rL + fC + izC + (i-\tau)S_0 + iS_1 - 2ie_0 - ie_1 - \frac{\alpha e_1^2}{2}\right\}$$

- Balance sheet identity at $t = 0$

$$L + S_0 = \overline{D}_{LCM} + D_{LCM} + e_0$$

- Balance sheet identity at $t = 1$

$$L + S_1 + zC = \overline{D}_{LCM}(1-\omega) + D_{LCM}(1-z) + e_0 + e_1$$

- Date 1 liquid assets holdings cannot be negative

$$S_1 \geq 0$$

Euler Equations

- Euler equation for loans (L)
  - Marginal loan is financed from 2-period claims

$$r + Lr_L = 2i$$

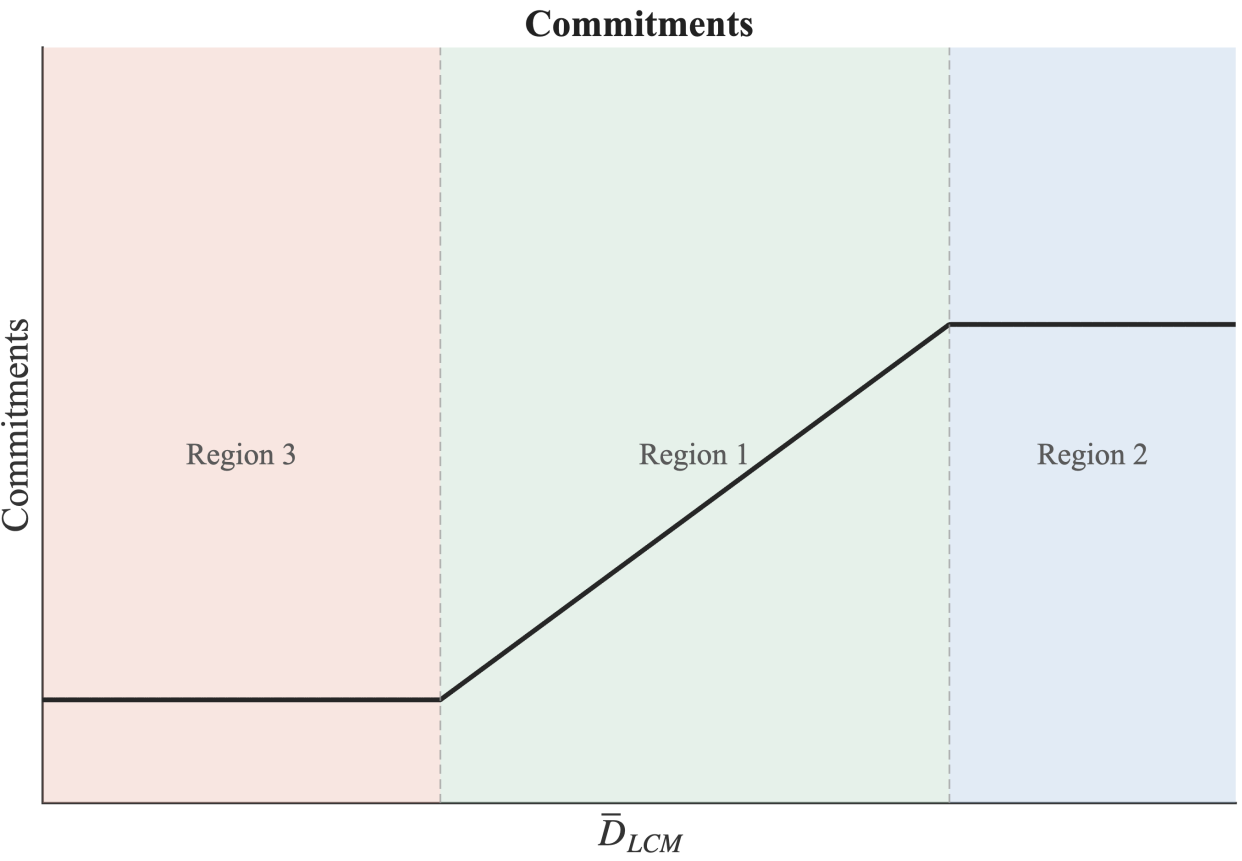
- Euler equation for commitments (C)
  - Extra dollar of commitment increases fee income but also increases expected cost of issuing *t=1* claims

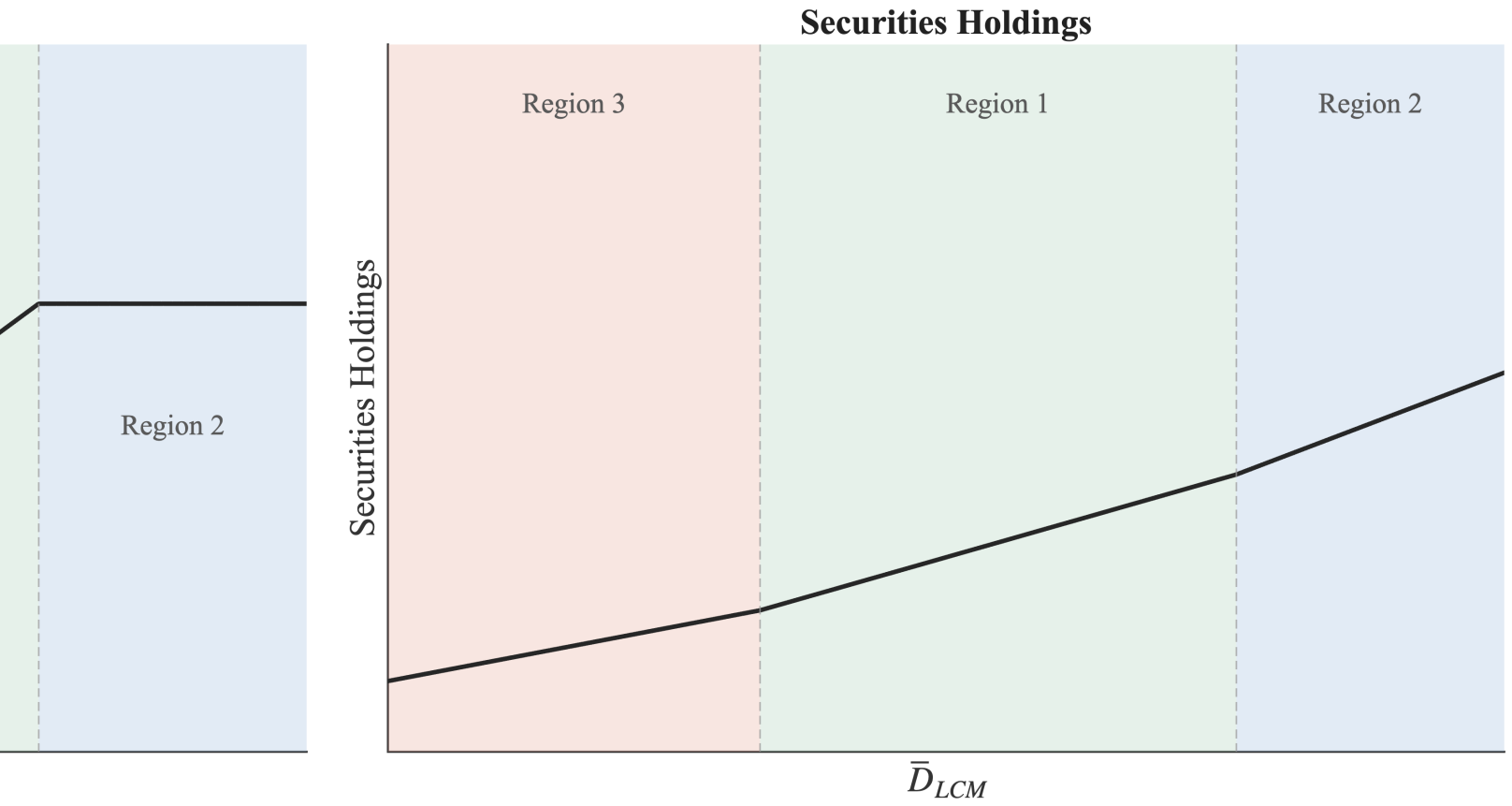
$$f + Cf_c = \frac{\alpha}{2} \cdot \frac{dE(e_1^2)}{dC}$$

- Euler equation for securities (S_0)
  - Holding securities costs τ bust saves expected cost of issuing claims at $t = 1$

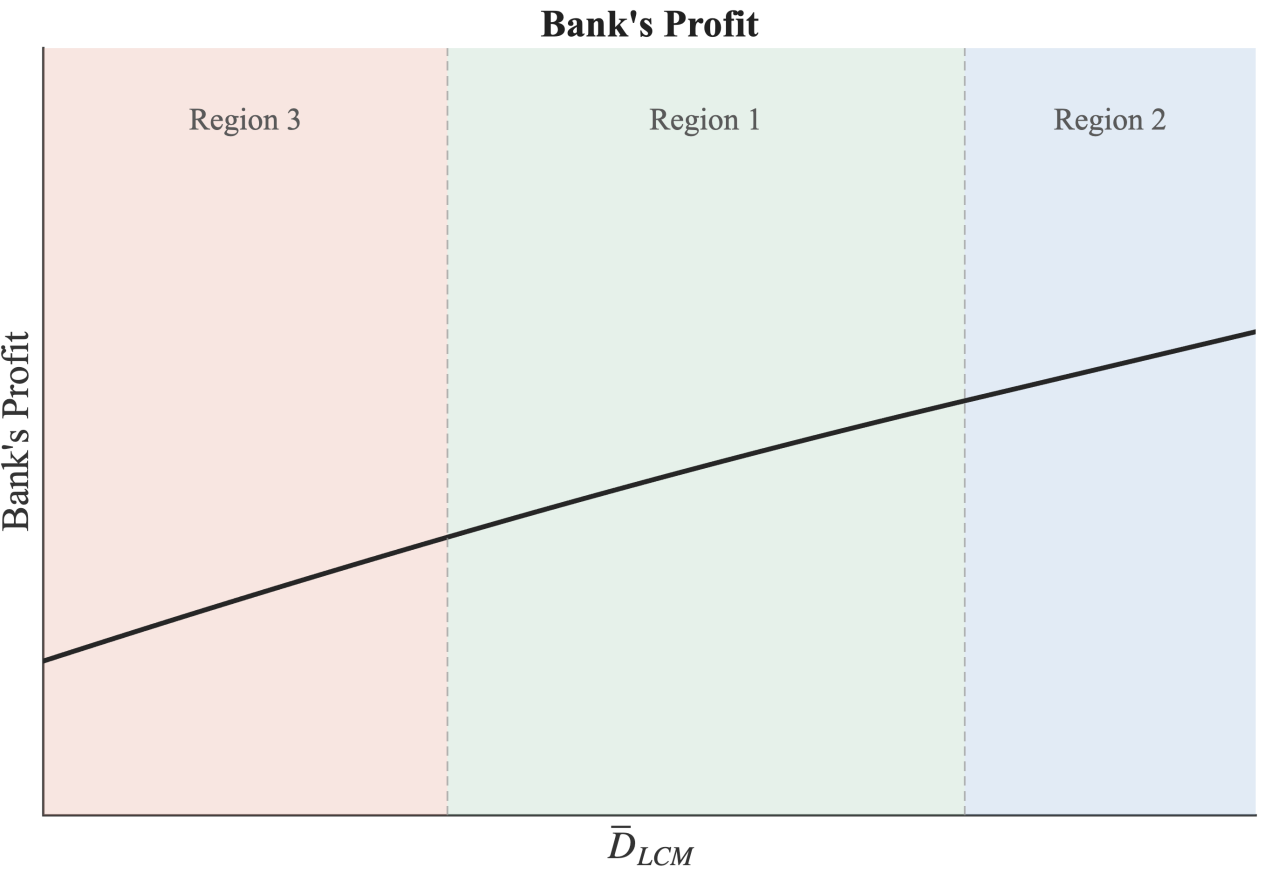
$$\tau = -\frac{\alpha}{2} \cdot \frac{dE(e_1^2)}{dS_0}$$

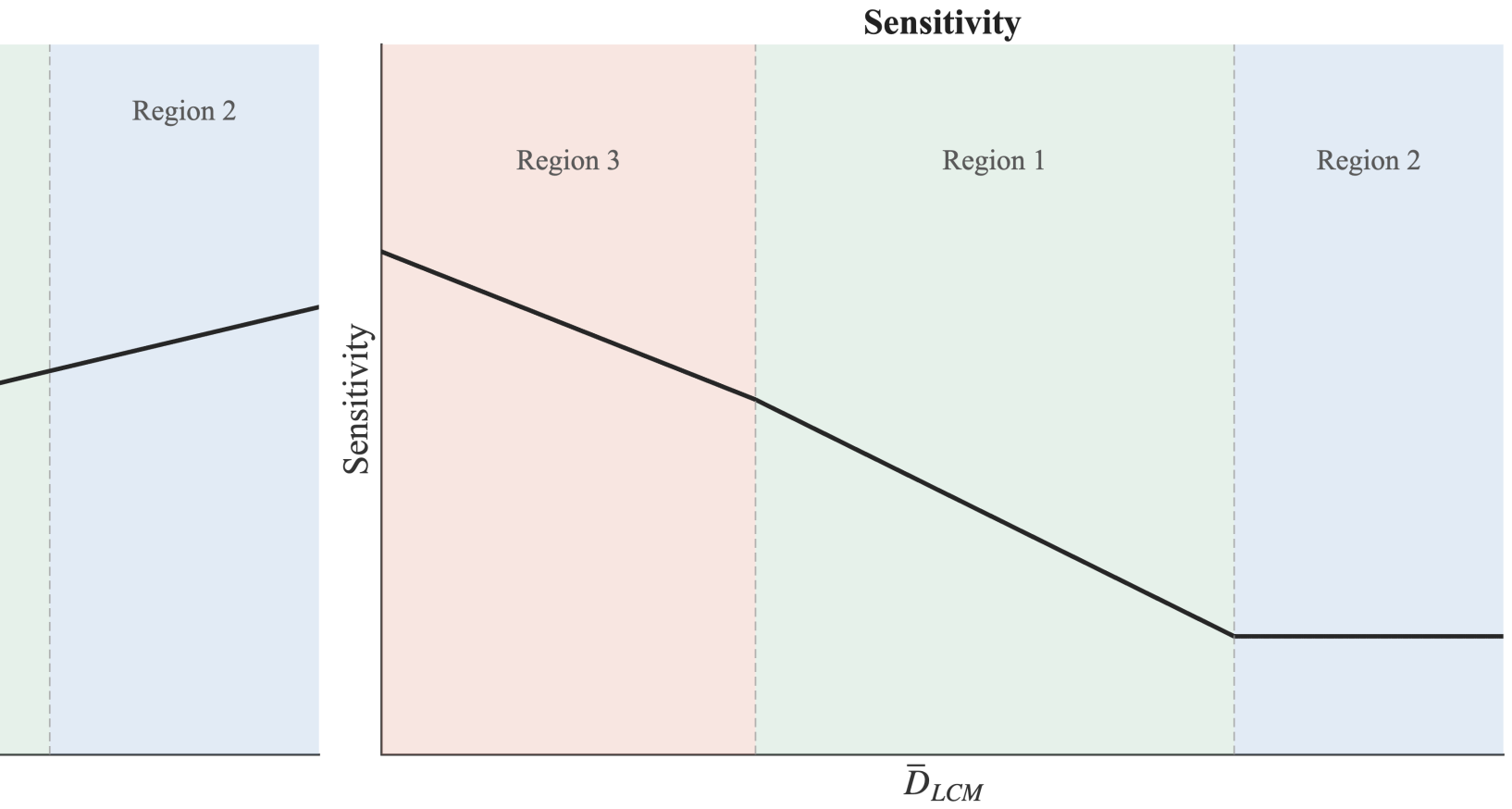
Commitments and Securities Holdings





Bank's Profit and Profit Sensitivity



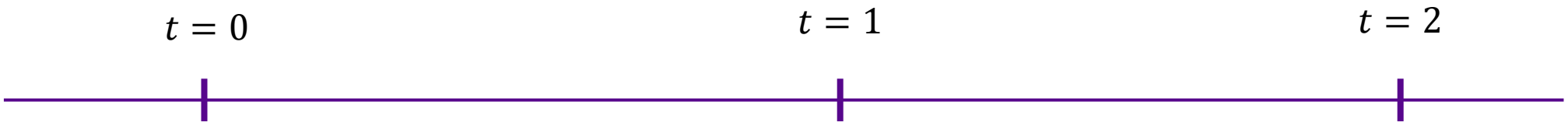


Extension 1: Bank Competes with MMF

Competition between the Bank and MMF

- Money Market Fund (MMF) performs as a narrow bank.
- It takes deposits and invests in the same liquid assets as bank
- Suppose LCM depositors (D_{LCM}) always stay with bank (can provide the liquidity services)
- Bank and MMF compete to attract non-LCM depositors $\left(\overline{D}_{LCM}\right)$
- Assume MMF is also subject to the non-LCM deposits withdrawal, i.e. Fraction ω of $\overline{D}_{LCM}$ depositors withdraw at $t = 1$, and ω is 0 or 1 with equal probability
- Both bank and MMF pay interest on non-LCM deposits $\left(\overline{D}_{LCM}\right)$ at $t = 1$.
- Competition in Deposit Rates: The non-LCM deposit rate increases in both own non-LCM deposits and the opponent's non-LCM deposits (do not model depositors, for now…)

Timeline: MMF



Assets
Buy securities, S_0^M

Liabilities
Issue deposits to Non-LCM customer, $\overline{D}_{LCM,M}$

Assets
Securities left, S_1^M

Liabilities
Non-LCM deposits left, $(1-\omega)\overline{D}_{LCM,M}$

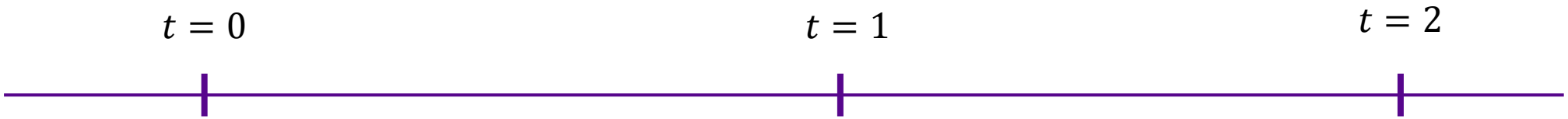
MMF's Payoff
Pay $r_M \overline{D}_{LCM,M}$

$$r_M = \left(\beta_2 + \beta_3 \overline{D}_{LCM,B}\right) \overline{D}_{LCM,M}$$

MMF's Payoff
Earn $(i-\tau)S_0^M + iS_1^M$

Pay 0

Timeline: Bank



Assets

Make loans, L

Buy securities, S_0

Liabilities

Issue claims, e_0

Issue deposits to LCM customer, D_{LCM}

Issue deposits to Non-LCM customer, $\bar{D}_{LCM,B}$

Sell commitments to LCM customer, C

Assets

Securities left, S_1

Liabilities

Issue claims, e_1

LCM-Deposits left, $(1-z)D_{LCM}$

Non-LCM deposits left, $(1-\omega)\bar{D}_{LCM,B}$

Commitments drawn, zC

Bank's Payoff

Pay $r_B \bar{D}_{LCM,B}$

$$r_B = \left(\beta_0 + \beta_1 \bar{D}_{LCM,M}\right) \bar{D}_{LCM,B}$$

Bank's Payoff

Earn $r(L)$

Earn $(i-\tau)S_0 + iS_1$

Pay $2ie_0 + \left(ie_1 + \alpha e_1^2/2\right)$

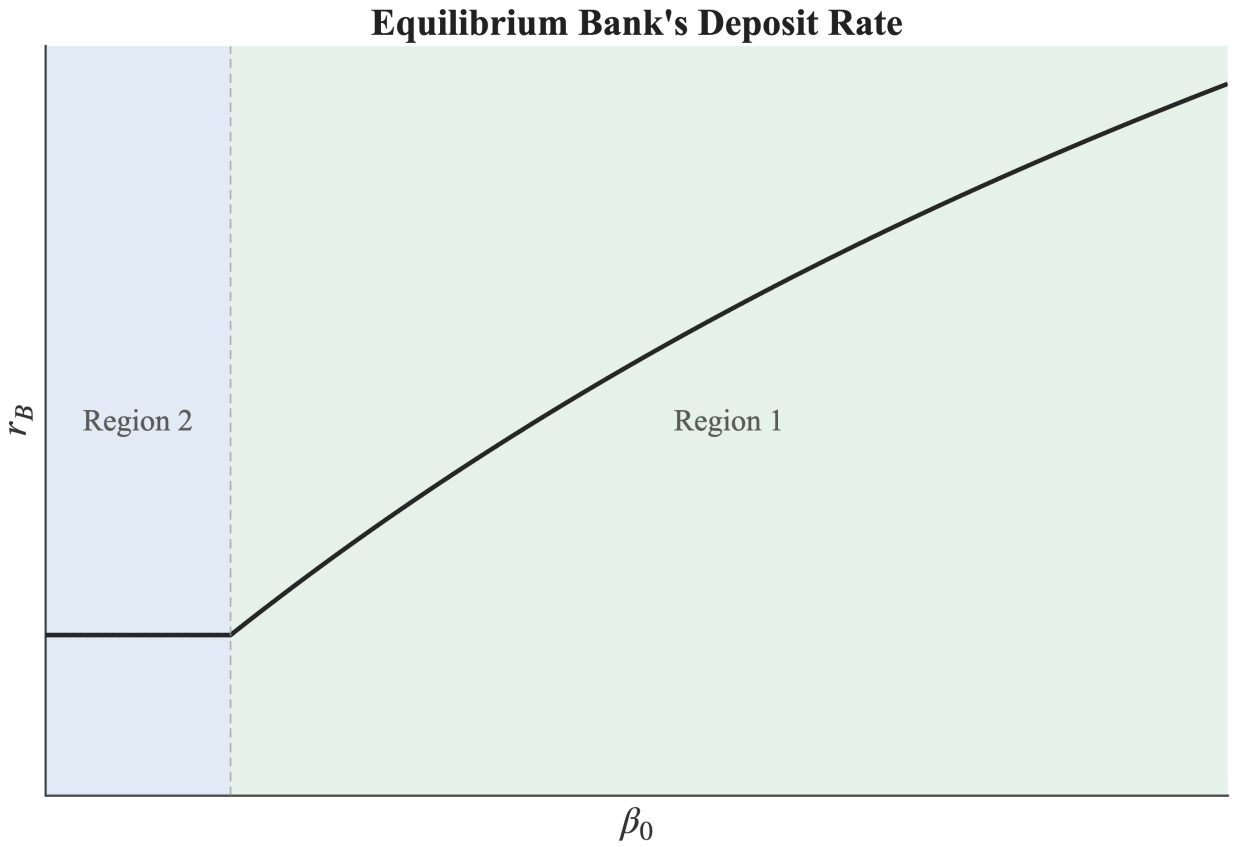
Pay 0

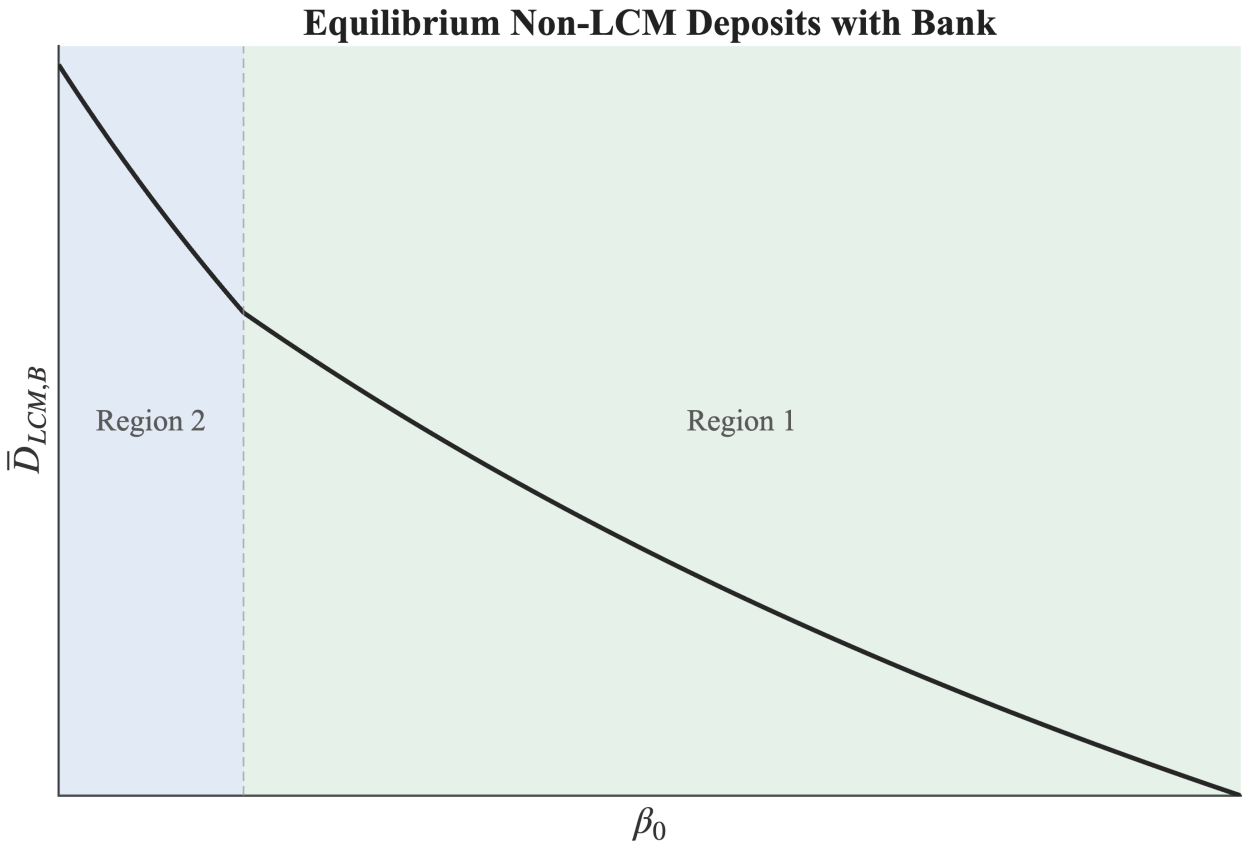
Pay 0

Earn $fC + izC$

Equilibrium Deposit Rate and Non-LCM Deposits

- β_0: parameter in the bank's deposit rate schedule, a higher β_0 implies more intense competition





Extension 2: Bank Receives a Fee from PS

Bank receives a fee from Payment Stablecoin

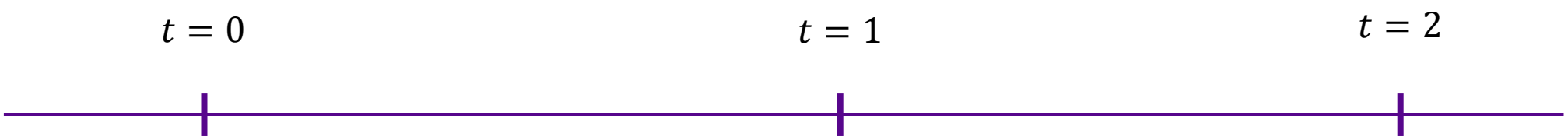
- Payment Stablecoin (PS) resembles the MMF but can provide convenient payment services to the customers
- Treat the reward from PS to customers as a form of deposit interest
- Because of the provision of payment services, PS can receive a convenience premium (above the benchmark rate $\bar{r}$) on deposits
- PS doesn't have access to Fed's skinny account so it should pay a fraction of total convenience value to bank in order to provide the payment services
- Bank receives this fee at $t = 0$ or $t = 1$
- Result: No effect on bank's objective function given no solvency concerns in KRS model

Extension 3: Bank Competes with PS

Competition between Bank and PS

- Suppose LCM depositors (D_{LCM}) always stay with the bank as the bank can provide the liquidity services
- Bank and PS compete to attract non-LCM depositors $(\overline{D}_{LCM})$
- Bank can incur a cost (g) to improve the payment technology that can lower the deposit rate it has to offer, all else equal
- The non-LCM deposit rate increases in both own non-LCM deposits and the opponent's non-LCM deposits
- Assume the bank receives the access fee at $t = 0$

Timeline: Payment Stablecoin



Assets
Buy securities, S_0^P

Liabilities
Issue deposits to Non-LCM customer, $\overline{D}_{LCM,P}$

PS's Payoff
Earn $(r_P - \bar{r})\overline{D}_{LCM,P}$
Pay $\gamma(r_P - \bar{r})\overline{D}_{LCM,P}$

$$r_P = \left(\beta_2 + \beta_3 \overline{D}_{LCM,B}\right)\overline{D}_{LCM,P}$$

Assets
Securities left, S_1^P

Liabilities
Non-LCM deposits left, $(1 - \omega)\overline{D}_{LCM,P}$

PS's Payoff
Pay $r_P \overline{D}_{LCM,P}$

MMF's Payoff
Earn $(i - \tau)S_0^P + iS_1^P$

Pay 0

Timeline: Bank



Assets

Make loans, L

Buy securities, S_0

Liabilities

Issue claims, e_0

Issue deposits to LCM customer, D_{LCM}

Issue deposits to Non-LCM customer, $\bar{D}_{LCM,B}$

Sell commitments to LCM customer, C

Bank's Payoff

Earn $\mathrm{P} = \gamma(r_P - \bar{r})\bar{D}_{LCM,P}$

Incur payment technology investment cost $-\frac{1}{2}\lambda g^2$

Assets

Securities left, S_1

Liabilities

Issue claims, e_1

LCM-Deposits left, $(1-z)D_{LCM}$

Non-LCM deposits left, $(1-\omega)\bar{D}_{LCM,B}$

Commitments drawn, zC

Bank's Payoff

Pay $r_B\bar{D}_{LCM,B}$

$r_B = \left(\beta_0 + \beta_1\bar{D}_{LCM,P}\right)\bar{D}_{LCM,B} - g$

Bank's Payoff

Earn $r(L)$

Earn $(i-\tau)S_0 + iS_1$

Pay $2ie_0 + \left(ie_1 + \alpha e_1^2/2\right)$

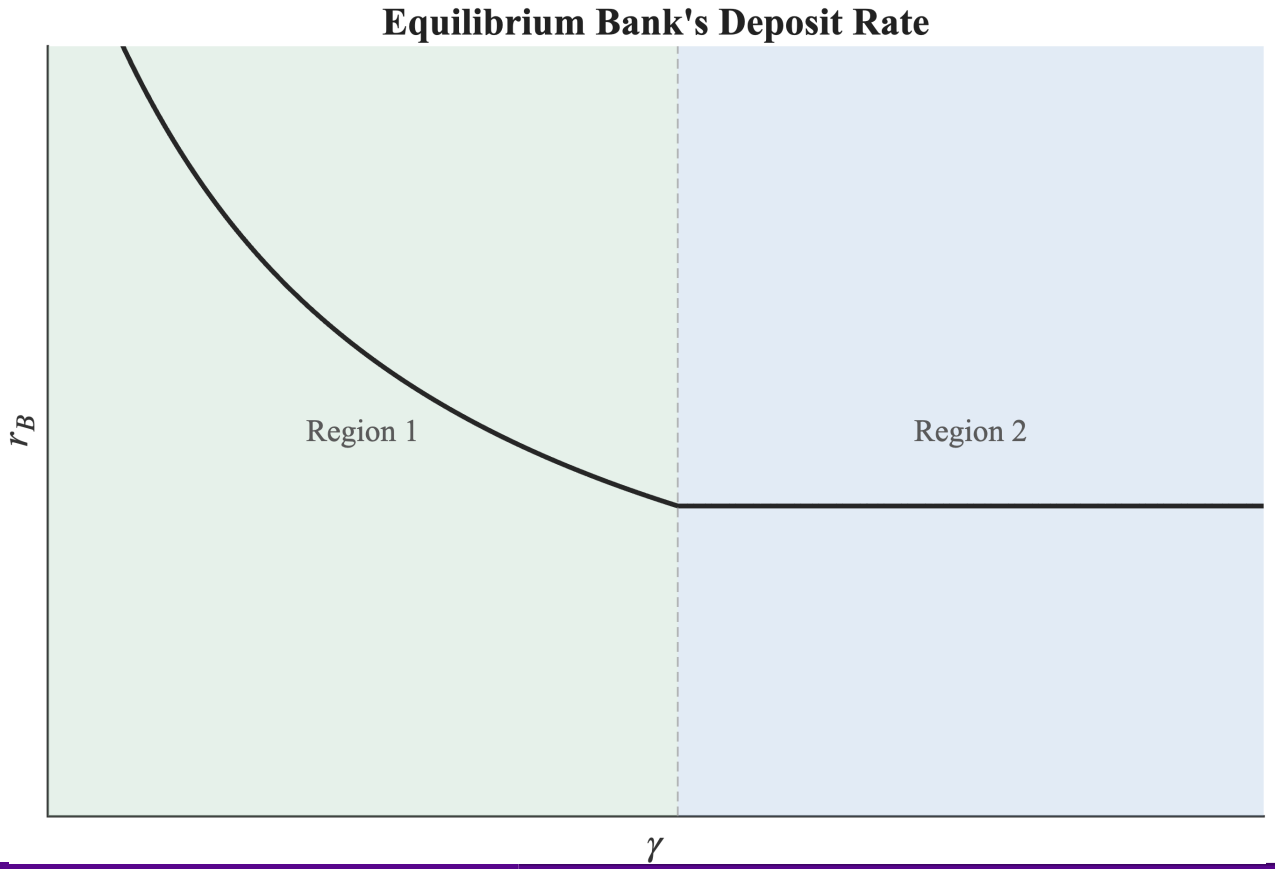
Pay 0

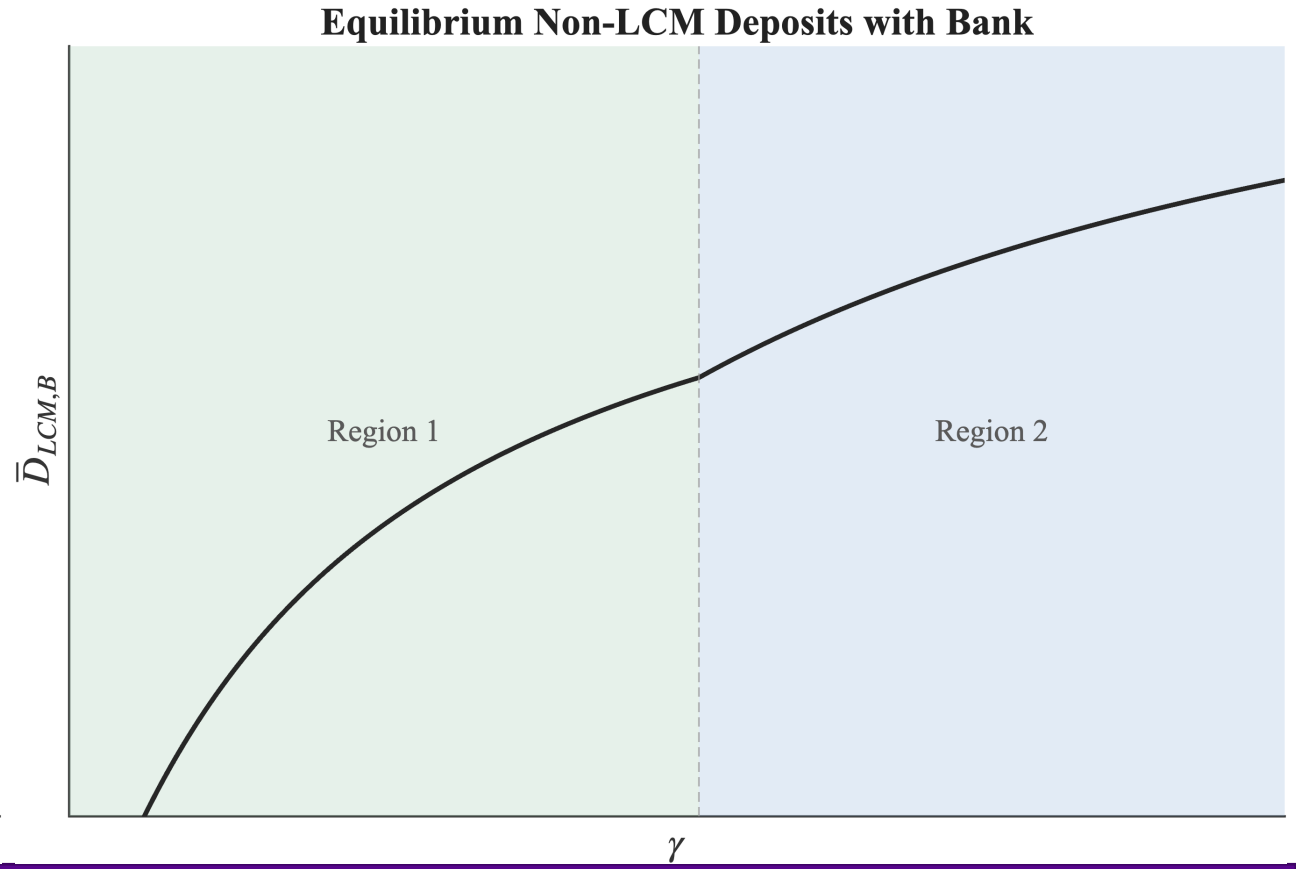
Pay 0

Earn $fC + izC$

Equilibrium Deposit Rate and Non-LCM Deposits

- γ: Fraction of convenience value paid to bank from PS



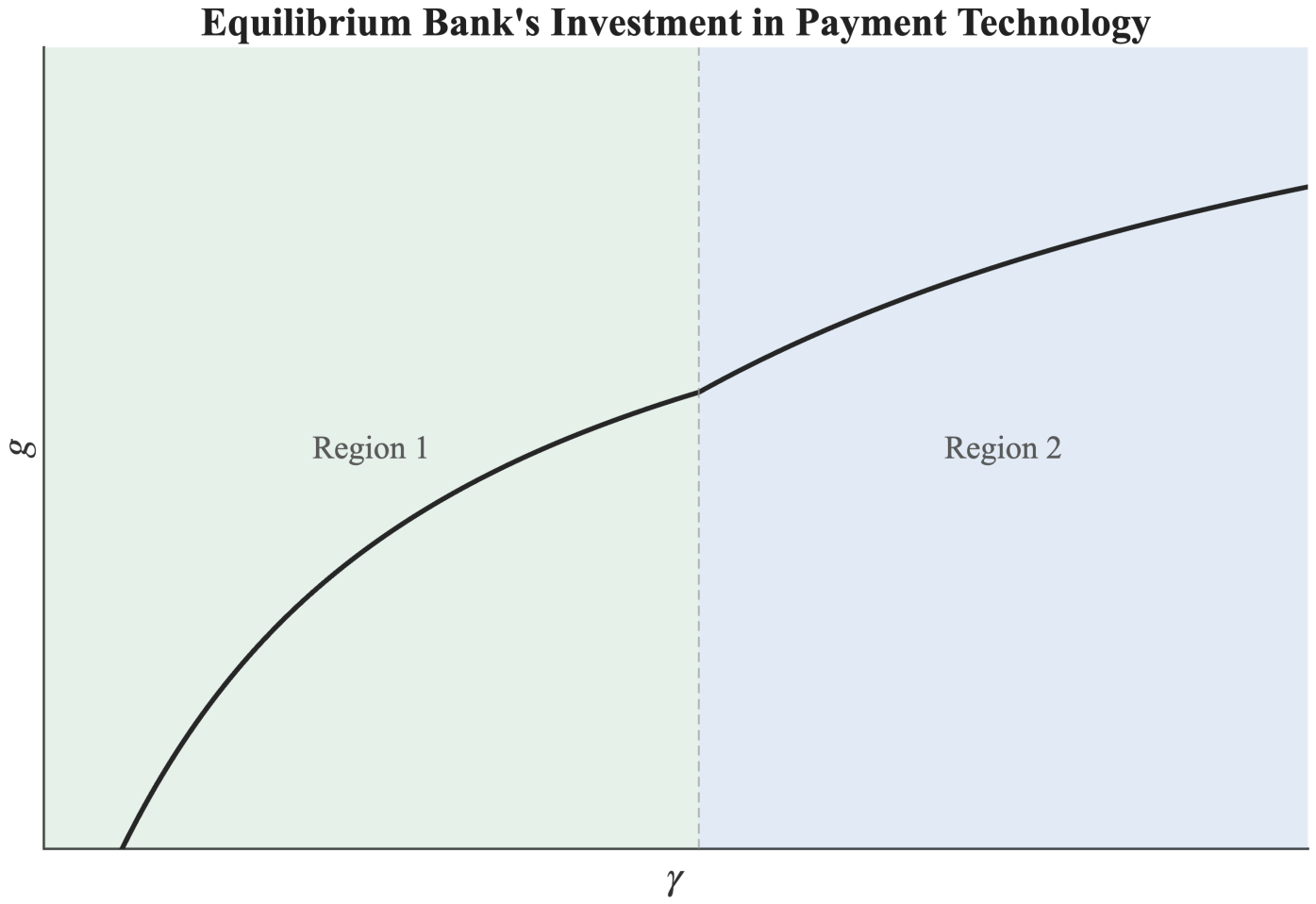


Access to Fed's Skinny Account

- When γ decreases to 0, it is the case when PS has the access to Fed's skinny account and can run its payment and settlement services independent of bank
- It increases bank's equilibrium non-LCM deposit rate and decreases bank's equilibrium non-LCM deposits, pushing the equilibrium to the left-most region (Region 3) where bank has the least ability to provide liquidity services

- When γ decreases to 0 … can also be interpreted as Central Bank Digital Currency (CBDC)
- CBDC's offer (some) payment services but no liquidity services like overdrafts (and don't pay interest rate, as of now)

Equilibrium Bank's Investment



Summary of Conceptual Results

- Non-LCM deposits ↑ ⇒ Commitments rise then plateau (Region 1 → Region 2)
- Deposit rates: Bank > MMF (Region 1); Bank = MMF (Region 2)

→ Depositor competition can heat up the rate war on deposits non-linearly

- Fraction of convenience value paid by PS to bank ↑ ⇒ more investment in payments technology (e.g., tokenized deposits) & non-LCM deposits with Bank

→ As with MMF competition, banks likely to respond and preserve liquidity provision

Future Directions

- Caution: Local experiments of small payments (stablecoin) or CBDC innovations might not be representative of counterfactuals over large innovations
- When bank incurs a cost to improve the payment technology, it most likely also benefits LCM depositors, altering their liquidity needs
  - Fundamental change in Bank's role as a liquidity provider, so welfare affected more subtly
- Micro-model of depositor competition for rates, services (payments, liquidity), …
- GE for cash → GENIUS Act implications for safe asset yields and Dollar status

(Some) Related Literature

- Chiu, Davoodalhosseini, Jiang, and Zhu (2023): If banks have deposit market power, central bank digital currencies can enhance competition, so long as they don't set the interest rate too high, which would lead to disintermediation.
- Cong (2025): PS competition could be improve bank intermediation through deposit pricing and modernization of settlement and liquidity management.
- Wang (2025): among many other points, says that bank transaction accounts are most vulnerable and that bank synergies between payments and credit intermediation may be challenged.

- See Appendix for a comprehensive list

Thank you! ☺

Questions?